VOL. 507 JOURNAL OF CHROMATOGRAPHY MAY 16, 1990

13TH INTERNATIONAL SYMPOSIUM ON COLUMN LIQUID CHROMATOGRAPHY, STOCKHOLM, JUNE 25–30, 1989, PART II

APPLICATIONS

Amino acids, peptides, proteins and polynucleotides

Study of the retention mechanism of proteins in hydrophobic interaction chromatography
by X. Geng, L. Guo and J. Chang (Xi'an, China) 1

High-performance size-exclusion chromatography and molar mass measurement by low-angle laser light scattering of recombinant yeast-derived human hepatites B virus surface antigen vaccine particles
by Y. Sato (Osaka, Japan), N. Ishikawa (Kagawa, Japan) and T. Takagi (Osaka, Japan) . 25

High-performance liquid chromatography of amino acids, peptides and proteins. CI. Identification and characterisation of coulombic interactive regions on sperm whale myoglobin by high-performance anion-exchange chromatography and computer-graphic analysis
by A. N. Hodder (Clayton, Australia), K. J. Machin (Fitzroy, Australia) and M. I. Aguilar and M. T. W. Hearn (Clayton, Australia) 33

Modification of the selectivity of a reversed-phase high-performance liquid chromatographic system by binding sodium dodecyl sulphate to peptides
by L. Dalla Libera (Padova, Italy) 45

Development and validation of a high-performance liquid chromatographic method for the determination of demosines in tissues
by E. Guida, M. Codini, C. A. Palmerini and C. Fini (Perugia, Italy), C. Lucarelli (Rome, Italy) and A. Floridi (Perugia, Italy) 51

High-performance liquid chromatographic study of the reduction of protected oxytocein by sodium in liquid ammonia
by A. Péter, F. Lukács and K. Burger (Szeged, Hungary) and I. Schön, M. Löw and L. Kisfaludy (Budapest, Hungary) 59

Fully automated amino acid analysis for protein and peptide hydrolysates by precolumn derivatization with 9-fluorenyl methylchloroformate and 1-aminoadamantane
by B. Gustavsson and I. Betnér (Bromma, Sweden) 67

High-performance liquid chromatographic determination of an arginine-containing octapeptide antagonist of vasopressin in human plasma by means of a selective post-column reaction with fluorescence detection
by V. K. Boppana and G. R. Rhodes (King of Prussia, PA, U.S.A.) 79

Characterization of a reversed-phase high-performance liquid chromatographic system for the determination of blood amino acids
by G. Buzzigoli, L. Lanzone, D. Ciociaro, S. Frascerra, M. Cerri, A. Scandroglio, R. Coldani and E. Ferrannini (Pisa, Italy) 85

Separation of free amino acids by reversed-phase ion-pair chromatography with column switching and isocratic elution
by M. Hirukawa (Iruma, Japan), M. Maeda and A. Tsuji (Tokyo, Japan) and T. Hanai (Kyoto, Japan) 95

Rapid and sensitive determination of nucleoside H-phosphonates and inorganic H-phosphonates by high-performance liquid chromatography coupled with flow-injection analysis
by Y. Baba (Oita, Japan), M. Tsuhako (Kobe, Japan) and N. Yoza (Fukuoka, Japan) . . 103

Analysis of oligonucleotides by capillary gel electrophoresis
by A. Paulus and J. I. Ohms (Palo Alto, CA, U.S.A.) 113

Pharmaceuticals

Comparison of high-performance liquid chromatography, supercritical fluid chromatography and capillary zone electrophoresis in drug analysis
by W. Steuer, I. Grant and F. Erni (Basle, Switzerland) 125

Use of high-performance liquid chromatography in the pharmaceutical industry
by F. Erni (Basle, Switzerland) 141

High-performance liquid chromatographic method for studies on the photodecomposition kinetics of chlorothiazide
by V. Ulvi and S. Tammilehto (Helsinki, Finland) 151

Quantitative determination of cholesterol in liposome drug products and raw materials by high-performance liquid chromatography
by J. K. Lang (Menlo Park, CA, U.S.A.) 157

High-performance liquid chromatography of the drug fosinopril
by J. Kirschbaum, J. Noroski, A. Cosey, D. Mayo and J. Adamovics (New Brunswick, NJ, U.S.A.) 165

High-performance liquid chromatographic method for the simultaneous assay of a new synthetic penem molecule and its salt-forming agent in injectable formulations
by M. Farina, G. Finetti and V. Busnelli (Milan, Italy) 171

Determination of penicillin G in milk by high-performance liquid chromatography with automated liquid chromatographic cleanup
by W. A. Moats (Beltsville, MD, U.S.A.) 177

Determination of monoamine oxidase B inhibitor Ro 19-6327 in plasma by high-performance liquid chromatography using precolumn derivatization with fluorescamine and fluorescence detection
by R. Wyss and W. Philipp (Basle, Switzerland) 187

Simultaneous analysis of theophylline, caffeine and eight of their metabolic products in human plasma by gradient high-performance liquid chromatography
by T. E. B. Leaky (London, U.K.) 199

Determination of mephenesin in plasma by high-performance liquid chromatography with fluorimetric detection
by P. Guinebault, C. Colafranceschi and G. Bianchetti (Meudon-la-Fôret, France) . . . 221

High-performance liquid chromatographic determination of the mucoregulatory drug CO/1408 in rat plasma and urine
by M. A. Girometta, L. Loschi and P. Ventura (Piacenza, Italy) 227

High-performance liquid chromatographic assay of ampicillin and its prodrug lenampicillin
by A. Marzo, N. Monti and M. Ripamonti (Como, Italy) and E. Arrigoni Martelli and M. Picari (Rome, Italy) 235

Determination of aliphatic amines by gas and high-performance liquid chromatography
by A. Marzo, N. Monti and M. Ripamonti (Como, Italy) and S. Muck and E. Arrigoni Martelli (Rome, Italy) 241

High-performance liquid chromatographic determination of propylthiouracil in plasma
by M. T. Rosseel and R. A. Lefebvre (Ghent, Belgium) 247

Direct injection high-performance liquid chromatographic assay of morphine with electrochemical detection, a polymeric column and an alkaline eluent
by F. Tagliaro and G. Carli (Verona, Italy), R. Dorizzi (Legnago, Italy) and M. Marigo (Verona, Italy) 253

Measurement of 5-fluorouracil and its active metabolites in tissue
by T. A. Stein, G. P. Burns, B. Bailey and L. Wise (New Hyde Park, NY, U.S.A.) 259

Optimization of multidimensional high-performance liquid chromatography for the determination of drugs in plasma by direct injection, micellar cleanup and photodiode array detection
by J. V. Posluszny and R. Weinberger (Ramsey, NJ, U.S.A.) and E. Woolf (Cedar Knolls, NJ, U.S.A.) 267

Liquid chromatographic investigation of quinoxaline antibiotics and their analogues by means of ultraviolet diode-array detection
by T. V. Alfredson and A. H. Maki (Davis, CA, U.S.A.), M. E. Adaskaveg and J.-L. Excoffier (Walnut Creek, CA, U.S.A.) and M. J. Waring (Cambridge, U.K.) 277

Determination of partition coefficients of non-ionic contrast agents by reversed-phase high-performance liquid chromatography
by I. J. Alonso-Silva, J. M. Carretero, J. L. Martin and A. M. Sanz (Madrid, Spain) . . . 293

Biological applications

Combination of positron emission tomography with liquid chromatography in neuropharmacologic research
by P. Hartvig and B. Långström (Uppsala, Sweden) 303

Interrelation between nucleotide degradation and aldehyde formation in red blood cells. Influence of xanthine oxidase on metabolism: an application of nucleotide and aldehyde analyses by high-performance liquid chromatography
by A. Werner, W. Siems, T. Grune and C. Schreiter (Berlin, G.D.R.) 311

Monitoring and purification of gluconic and galactonic acids produced during fermentation of whey hydrolysate by *Gluconobacter oxydans*
J. C. Motte, N. Van Huynh, M. Decleire, P. Wattiau, J. Walravens and X. Monseur (Tervuren, Belgium) 321

Simultaneous determination of ginsenosides and saikosaponins by high-performance liquid chromatography
by H. Kanazawa, Y. Nagata, Y. Matsushima, M. Tomoda and N. Takai (Tokyo, Japan) . 327

Modified high-performance liquid chromatographic determination of diamine oxidase activity in plasma
by P. A. Biondi, F. Ceciliani and C. Gandini (Milan, Italy) and C. Lucarelli (Rome, Italy) 333

Separation and determination of molecular species of phosphatidylcholine in biological samples by high-performance liquid chromatography
by A. Cantafora, M. Cardelli and R. Masella (Rome, Italy) 339

Mechanistic study on the derivatization of aliphatic carboxylic acids in aqueous non-ionic micellar systems
by F. A. L. van der Horst, J. M. Reijn, M. H. Post and A. Bult (Utrecht, The Netherlands) and J. J. M. Holthuis and U. A. Th. Brinkman (Amsterdam, The Netherlands) 351

Optimization of the high-performance liquid chromatography of coumarins in *Angelica archangelica* with reference to molecular structure
by P. Härmälä, H. Vuorela, P. Lehtonen and R. Hiltunen (Helsinki, Finland) 367

Miscellaneous applications

Determination of warfarin in drinking water by high-performance liquid chromatography after solid-phase extraction
by J. Dalbacke, I. Dahlquist and C. Persson (Malmö, Sweden) 381

Isolation of toxic polychlorinated biphenyls by electron donor–acceptor high-performance liquid chromatography on a 2-(1-pyrenyl)ethyldimethylsilylated silica column
by P. Haglund (Stockholm, Sweden) and L. Asplund, U. Järnberg and B. Jansson (Solna, Sweden) 389

Transient changes of mobile phase in the high-performance liquid chromatographic separation of priority pollutant phenols
by M. D. Andrés, B. Cañas, R. C. Izquierdo and L. M. Polo (Madrid, Spain) and P. Alarcón (Colmenar Viejo, Spain) 399

Reversed-phase high-performance liquid chromatography applied to the direct analysis of untreated heterophasic systems
by A. Bettero, A. Semenzato and C. A. Benassi (Milan, Italy) 403

Separation and interconversion of 3-amino-2-cyanoacrylates by high-performance liquid chromatography
by Gy. Körtvélyessy, J. Körtvélyessy, T. Mester, G. Meszlényi and G. Janzsó (Budapest, Hungary) 409

Determination of phenol in poly(vinyl chloride)
by T. Suortti (Espoo, Finland) 417

Determination of fungistatic quaternary ammonium compounds in beverages and water samples by high-performance liquid chromatography
by T. Suortti and H. Sirviö (Espoo, Finland) 421

Liquid chromatography of organotin compounds on cyanopropyl silica gel
by A. Praet, C. Dewaele, L. Verdonck and G. P. Van der Kelen (Ghent, Belgium) 427

Optimization of electrochemical detection in the high-performance liquid chromatography of lignin phenolics from lignocellulosic by-products
by G. C. Galletti, R. Piccaglia and V. Concialini (Bologna, Italy) 439

High-performance liquid chromatographic determination of aliphatic thiols with aroylacrylic acids as fluorogenic precolumn derivatization reagents
by R. Gatti, V. Cavrini and P. Roveri (Bologna, Italy) and S. Pinzauti (Florence, Italy) . 451

Optimization of the postcolumn hydrolysis reaction on solid phases for the routine high-performance liquid chromatographic determination of N-methylcarbamate pesticides in food products
by A. de Kok, M. Hiemstra and C. P. Vreeker (Alkmaar, The Netherlands) 459

Liquid adsorption chromatography of styrene copolymers of methacrylates and acrylates
by S. Mori (Mie, Japan) 473

Separation of the oligomeric silsesquioxanes $(HSiO_{3/2})_{8-18}$ by size-exclusion chromatography
by H. Bürgy and G. Calzaferri (Berne, Switzerland) 481

Achievements and uses of critical conditions in the chromatography of polymers
by A. M. Skvortsov and A. A. Gorbunov (Leningrad, U.S.S.R.) 487

Author Index 497

In articles with more than one author, the name of the author to whom correspondence should be addressed is indicated in the article heading by a 6-pointed asterisk (*)